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(19)(CA) **APPLICATION FOR CANADIAN PATENT** (12)

(54) Replacable Hockey Stick Blade with Shatterproof Grip Material

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(71) Same as inventor

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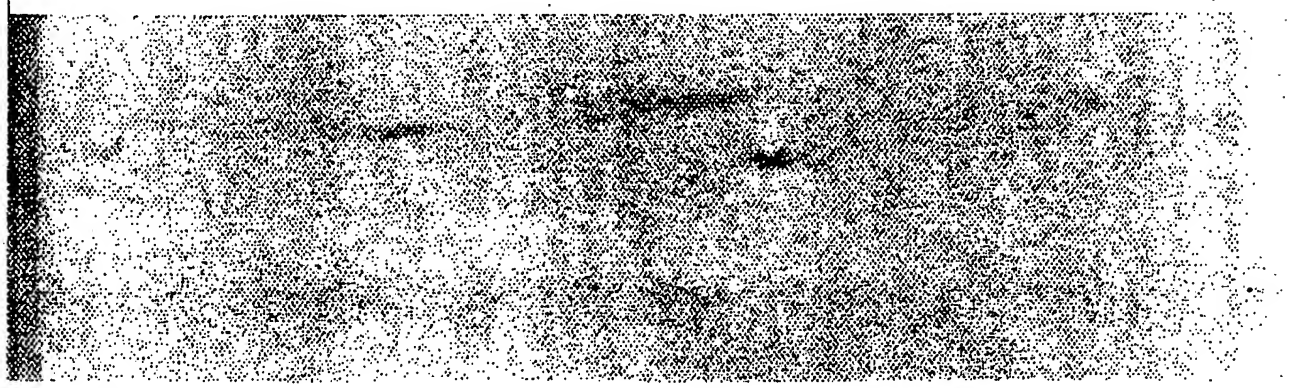

ABSTRACT OF THE DISCLOSURE

A hockey stick blade has a shank which is releasably secured in a reusable hockey stick shaft. The shank includes a shatter resistant material which provides a grip for removing the shank from the shaft in the event of breakage of the blade.

TITLE: REPLACEABLE HOCKEY STICK BLADE WITH SHATTERPROOF GRIP MATERIAL

FIELD OF THE INVENTION

The present invention relates to a hockey stick blade to be fitted with a reusable hockey stick shaft and more particularly, means on the blade to ease its removal from the shaft after the blade has been broken.

BACKGROUND OF THE INVENTION

Hockey stick blades to be used with reusable shafts and in particular, hollow aluminum reusable shafts have been introduced over the last few years to the market and are becoming more and more popular. These replacable blades may have an all wood construction, a composite wood and plastic construction, an all plastic construction or composite plastic construction.

The conventional method of fitting a replaceable blade to an aluminum shaft is to heat the shank of the blade which is covered with a heat meltable glue and to also heat the end of the shaft. The shank is then fitted up into the shaft end where the glue, upon cooling sets to hold the blade in the shaft.

The major difficulty encountered with this set up is that once the blade has broken, there is often very little left of the blade to provide a grip for pulling the shank out of the shaft which is required to enable reuse of the shaft.

SUMMARY OF THE INVENTION

In accordance with the present invention, a hockey stick blade has a shank to be removably secured in a reusable shaft for the blade. The shank includes shatter resistant material which provides a grip for removing the shank from the shaft in the event of breakage of the blade.

BRIEF DESCRIPTION OF THE DRAWINGS

The above as well as other advantages and features of the present invention will be described in greater detail according to the preferred embodiments of the present invention in which;

Figure 1 is a perspective view of a wooden hockey stick blade to be fitted into a reusable shaft where the shank of the blade is provided with shatter resistant material in accordance with a preferred embodiment of the present invention;

Figure 2 is an enlarged perspective view of the shank region of the blade from Figure 1;

Figure 3 is a perspective view of the blade shank of Figure 2 prior to receiving the shatter resistant material.

Figure 4 is a side view of the shaft of Figure 1 with the blade broken and the shank of the blade remaining in the shaft;

Figure 5 is a perspective view of the shank region of a blade in accordance with a further preferred embodiment of the present invention;

Figure 6 is a perspective view of the shank portion of a blade in accordance with still a further preferred embodiment of the present invention.

DETAILED DESCRIPTION ACCORDING TO THE PREFERRED EMBODIMENTS OF THE PRESENT INVENTION

Figure 1 shows a hockey stick set up including a reusable shaft 1 and a blade generally indicated at 3 replaceably fittable in the shaft. In accordance with presently available technology, the shaft has a hollow aluminum construction. It is also known that wooden replacement blades can be fitted with the reusable shaft. These blades, as earlier described, include shanks which are held by heat meltable glue in the shaft.

Blade 3 shown in Figures 1 and 2 of the drawings, has a novel construction in accordance with the present invention. This replaceable hockey blade has a wooden or composite construction and includes a horizontal blade portion 5 which turns upwardly as indicated at area 9 and terminates in an upper end shank 11. Shank 11 fits directly inside of the hollow lower end of shaft 1 to secure the blade with the shaft.

Quite often a blade will break by shattering in the blade region 9 above the horizontal blade portion 5. This then leaves only a small stump of wood sticking out from the bottom of the shaft.

The blade may also break directly at the bottom of the shaft with the shank stuck in the shaft.

In both of the above situations, there is very little, if any, material from the broken blade on which to get a grip for pulling the shank out of the shaft.

In accordance with the present invention, the replaceable hockey stick blade is provided with shatter resistant material secured to the shank of the blade which remains with the shank after the blade has been shattered. If the blade shatters leaving some of the horizontal blade portion with the shank, there may be enough blade to grip and to pull the shank out of the shaft. If however the

blade shatters somewhere above the horizontal blade portion, the shatter resistant material is exposed to provide a hand grip for pulling the shank from the shaft.

Figure 2 shows blade 3 as being provided with a strand of shatter resistant material 15 provided on the blade. This strand may be made from different shatter proof materials such as nylon or the like.

In the Figure 2 arrangement, strand 15 is secured over the top surface 13 of shank 11 and down along opposite side surfaces of the shank. The shank is covered with a heat meltable glue holding the strand to the shank and the remainder of the blade is covered with FIBREGLAS ™ material as indicated at 17 and the strand is encased within the FIBREGLAS ™.

Figure 3 shows blade 3 prior to receiving strand 15. As seen the shank of the blade is provided with a small recess 10 which runs up the opposite sides and across the top of the shank. The strand then seats in the recess.

Recess 10 provides two benefits, firstly it enables a countersinking of the strand in the shank so that the shank mounts flushly to the inside of the shaft. For this benefit the recess does not need to extend across the top of the shank.

Secondly, the recess provides a positive locater for the strand. To assist in locating the strand, it may be provided with a self adhering glue or the like to initially secure it in the recess. The hot melt glue provides a final securing of the upper end of the strand on the shank and the FIBREGLAS ™ secures the strand on the blade below the shank.

Figure 4 shows a situation in which the blade has been snapped at the juncture between the shank and the upward extension 9 of the blade. As is clearly shown, the opposite ends of the strand 15 which were previously secured on the opposite side faces of the blade, are not shattered with the blade and hang down from the bottom of the shaft. They then provide a grip for pulling the shank from the shaft.

In the preferred embodiment, the length of the strand on each side of the blade is sufficient to tie a knot in the strand ends forming a loop to enhance gripping of the strand.

Figure 5 shows an arrangement similar to Figure 2 where a strand of shatter resistant material 19 is once again secured over the top of the shank and then down along the opposite side surfaces of the blade. However, in this case, the strand has a preformed loop generally indicated at 21 secured across the top of the blade portion covered by the FIBREGLAS ™ over the blade. Once the blade breaks, the loop 21 at the end of the strand, hangs down and once again provides a hand grip for pulling the shank from the shaft.

Figure 6 shows a modified replaceable hockey stick blade generally indicated at 23. This blade includes a horizontally extending blade portion 24 and a vertically extending blade portion 25 terminating in an upper end shank 29. In this particular case, shank 29 includes a releasable interlock member 31 provided on one of the side surfaces of the shank and used to secure the shank within the shaft.

In the Figure 6 setup, case, a strand of shatter resistant material generally indicated at 33 runs from front to back rather than side to side across the top of

the shank. The strand continues down the front and back surfaces of the shank and then the upper end of the blade to a point where it divides into a pair of loops 35 on opposite sides of the blade portion. Strand 33 like the earlier strands is trapped in recesses on the front and back surface of the shank and once again encased in FIBREGLAS ™ generally indicated at 37 covering the blade below the shank.

The strand set up shown in Figure 5 of the drawings does not in any way interfere with the side lock provided on the shank of the blade.

As is the case with the earlier described embodiments, if the blade breaks somewhere along the upward extension of the blade either one or both of the loops 35 of the strand are exposed and provide a grip for removing the shank from the shaft.

Although various preferred embodiments of the present invention have been described herein in detail, it will be appreciated by those skilled in the art, that variations may be made thereto without departing from the spirit of the invention or the scope of the appended claims.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A hockey stick blade having a shank to be removably secured in a reusable shaft for the blade, said shank including shatter resistant material which provides a grip for removing said shank from the shaft in the event of breakage of said blade.

2. A hockey stick blade as claimed in Claim 1, wherein said shatter resistant material comprises at least one elongated strand of resilient material secured to said shank.

3. A hockey stick blade as claimed in Claim 2, wherein said elongated strand is formed in a loop.

4. A hockey stick blade as claimed in Claim 2 and wherein said shank has a top surface and opposing side surfaces, said strand being secured across said top surface and extending down said side surfaces of said shank.

5. A hockey stick blade as claimed in Claim 1, wherein said shank has a top surface, front and back surfaces and a side surface provided with a securing member for securing said shank in the shaft, said strand being secured across said top surface and along said front and back surfaces of said shank.

6. A hockey stick blade as claimed in Claim 4 or 5 wherein said strand is encased in FIBREGLAS ™ securing said strand to said blade.

7. A hockey stick blade as claimed in Claim 2, wherein said shank includes a recess and said strand is countersunk in said recess.

FIG.1.

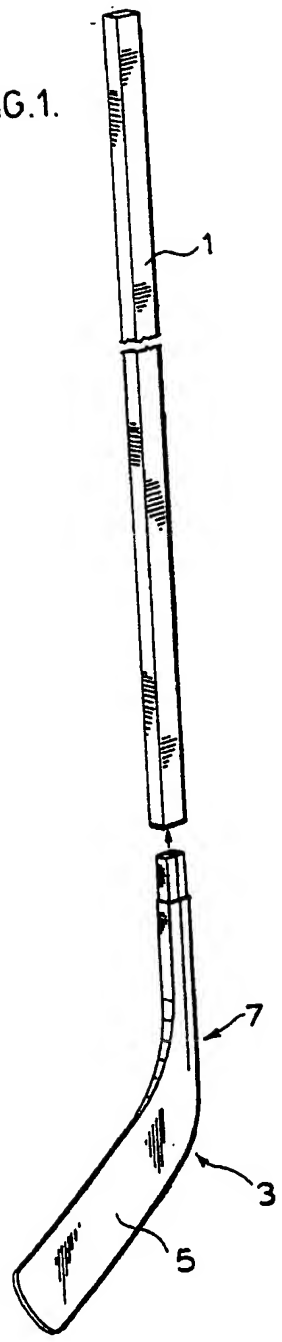

FIG. 2.

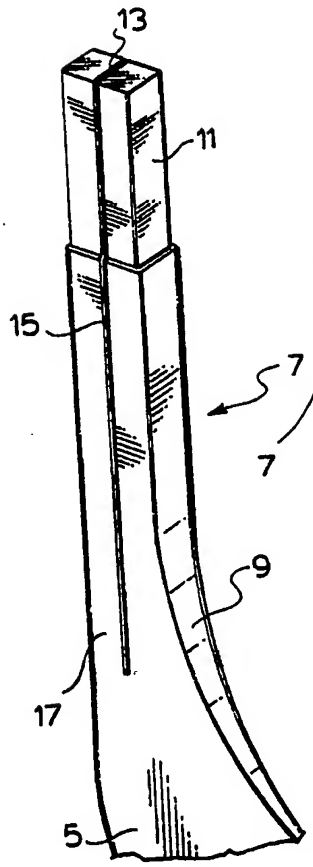

FIG. 3.

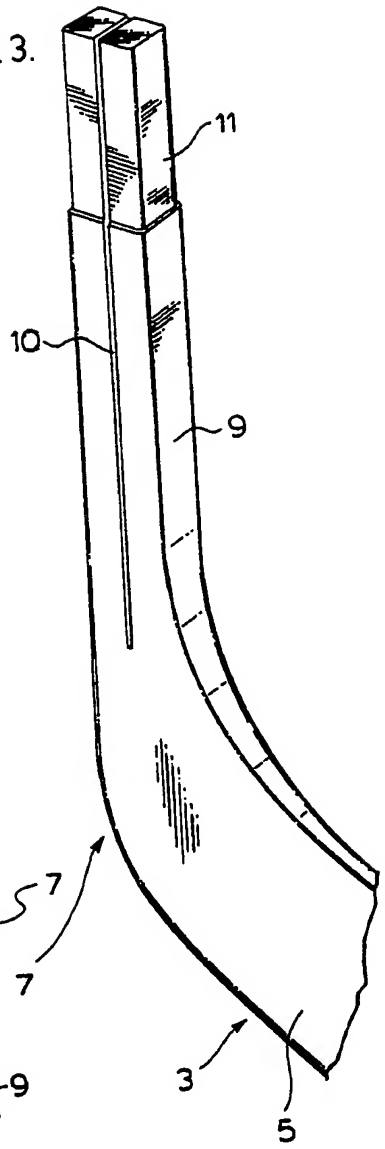

FIG.4.

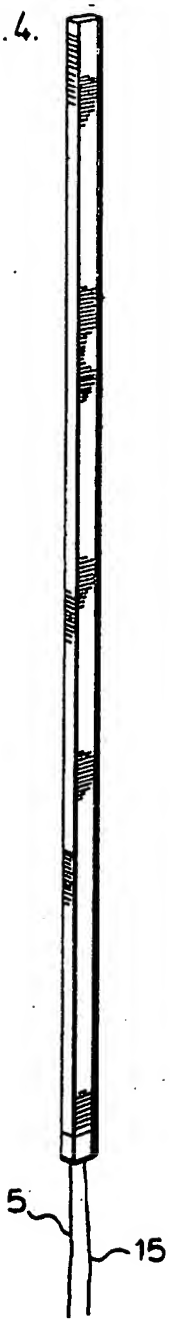

FIG.5.

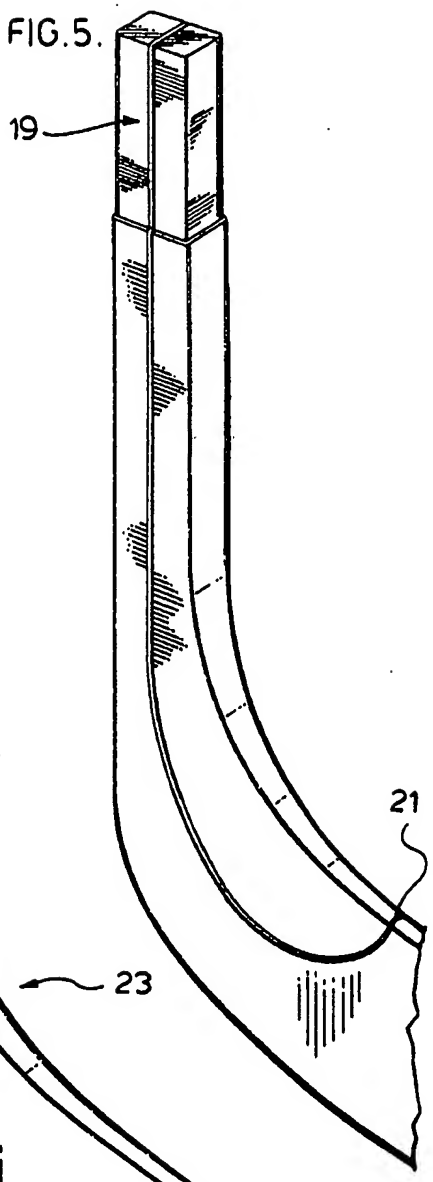

FIG.6.